Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte HUGO K. SCHULZ and LEONARD O. TURNER

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Appeal No. 2001-0017
Application No. 09/040,479

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ON BRIEF

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Before HAIRSTON, RUGGIERO, and SAADAT, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the Examiner's rejection of claims 1-8, 10-12, and 14-25. Claims 9 and 13 are indicated by the Examiner as being allowable subject to being rewritten in independent form to include all the limitations of the base claim and any intervening claims. An amendment filed February 23, 2000 after final rejection was denied entry by the Examiner.

The claimed invention relates to a circuit board stacking connector having a plug portion and a receptacle portion. The plug portion includes signal pins and impedance control pins that are adjacent to and similarly sized and shaped to the signal pins. The receptacle portion includes a signal pin for engaging the plug signal pin when the plug and the receptacle are in a mated position. Further included are impedance control shields located adjacent to the plug signal pin or receptacle signal pin.

Claim 1 is illustrative of the invention and reads as follows:

1. A connector comprising:

a plug portion comprising

a plug signal pin;

a plug impedance control pin located adjacent to the signal pin, the plug impedance control pin and the plug signal pin being similarly sized and shaped;

a receptacle portion comprising

a receptacle signal pin for engaging the plug signal pin when the plug portion and the receptacle portion are in a mated position; and

an impedance control shield located adjacent to the plug signal or the receptacle signal pin.

The Examiner relies on the following prior art:

Andrews (Andrews '340)	5,620,340	Apr. 15, 1997
Shimizu et al. (Shimizu)	5,645,436	Jul. 08, 1997
Andrews (Andrews '887)	5,842,887	Dec. 01. 1998 (filed Dec. 26, 1996)
Thenaisie et al. (Thenaisie)	5,851,121	Dec. 22, 1998 (filed Mar. 31, 1997)

Claims 1-8, 10-12, and 14-25 stand rejected under 35 U.S.C. § 103(a).[1] As evidence of obviousness, the Examiner offers Shimizu in view of Andrews '340 with respect to claims 1-6, 8, 10, 11, and 14-24. To this initial combination of references, the Examiner has separately added Andrews '887 as to claims 7 and 12, and Thenaisie as to claim 25.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief (Paper No. 16) and Answer (Paper No. 17) for the respective details.

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[1] The statement of the grounds of rejection of appealed claims 1-8, 10-12 and 14-25 at page 3 of the Answer makes reference to the final Office action mailed December 13, 1999 (Paper No. 12). This referenced Office action did not include claims 15-21 in the statement of the grounds of rejection at page 4. We assume, along with Appellants (Brief, page 4), that this was an inadvertent error of omission and the Examiner intended to include claims 15-21 in the group of claims rejected based on the combination of Shimizu and Andrews '340 as indicated in the earlier Office action mailed July 30, 1999 (Paper No. 10).

Further, although the Examiner, in the final Office action, had made a 35 U.S.C. § 112, second paragraph, rejection of claim 25, no mention of this rejection is made in the Examiner's Answer. We conclude, therefore, that this rejection has been withdrawn. See Ex parte Emm, 118 USPQ 180, 181 (Bd. Pat. App. & Int. 1957).

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner and the evidence of obviousness relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Brief along with the Examiner's rationale in support of the rejection and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-8, 10-12, and 14-25. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to

modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

With respect to independent claims 1, 10, 15, and 22, Appellants' arguments in response to the Examiner's obviousness rejection assert a failure by the Examiner to establish a prima facie case of obviousness since all of the claim limitations are not taught or suggested by the applied prior art. After careful review of the applied Shimizu and Andrews '340 references in light of the arguments of record, we are in general agreement with Appellants' arguments as set forth in the Brief.

Initially, we find ourselves in agreement with Appellants' contention that, contrary to the Examiner's assertion, the Shimizu reference has no structure which could reasonably be interpreted as corresponding to the claimed impedance control pins. Our interpretation of the disclosure of Shimizu coincides with that of Appellants, i.e., the impedance control structure in Shimizu is a grounding plate, not a pin as claimed. In our view, no reasonable interpretation of the structure of such a grounding plate would correspond to a pin that is "similarly sized and shaped" to that of the plug signal pin as set forth in each of the independent claims 1, 10, 15, and 22.

We also agree with Appellants that there is no evidence that the ground contact pins 8 in Andrews '340, while at least superficially illustrated as being of similar size and shape to signal pins 6, are in fact impedance control pins. As argued by Appellants (Brief, page 15), all of the pins in Andrews '340, the ground contact pins 8, as well as the signal pins 5, are intentionally isolated from the other pins by large metallic shields precluding any of the pins from impacting the impedance of neighboring pins. On the record before us, we are constrained to agree with Appellants since the Examiner has not responded to this argument from Appellants.

Given the above deficiencies in the disclosures of the applied prior art, we can find no teaching or suggestion, and the Examiner has pointed to none, as to how and in what manner the Shimizu and Andrews '340 references might be combined to arrive at the claimed invention. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992).

It is also our view, that, even assuming, arguendo, that proper motivation were established for modifying Shimizu with Andrews '340, there is no indication as to how such modification would address the particulars of the claim language of independent claims 1, 10, 15, and 22, each of which requires an impedance control pin which is similarly sized and shaped to a plug signal pin. In order for us to sustain the Examiner's rejection under 35 U.S.C. § 103, we would need to resort to speculation or unfounded assumptions or rationales to supply deficiencies in the factual basis of the rejection before us. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968), reh'g denied, 390 U.S. 1000 (1968). Given the factual situation presented to us, it is our

view that any suggestion to make the combination suggested by the Examiner could only come from Appellants' own disclosure and not from any teachings or suggestions in the references themselves.

Accordingly, since the Examiner has not established a prima facie case of obviousness, the rejection of independent claims 1, 10, 15, and 22, as well as claims 2-8, 11, 12, 14, 16-21, 23, and 24 dependent thereon, is not sustained.

Turning to a consideration of the Examiner's 35 U.S.C. § 103(a) rejection of independent claim 25 based on the combination of Shimizu and Andrews '340, we do not sustain the obviousness rejection of this claim as well. Unlike independent claims 1, 10, 15, and 22 previously discussed, independent claim 25 does not contain the "similarly sized and shaped" language relating to the signal and impedance control pins. This claim, however, does have specific recitations requiring, inter alia, "impedance control pins," a feature which we found lacking of any teaching or suggestion, individually or collectively, in the Shimizu and Andrews '340 references discussed supra.

We have also reviewed the Andrews '887 and Thenaisie references applied by the Examiner to address the claimed details of the pin beam and shield surround configurations, respectively.

We find nothing in either of these references, however, which would overcome the innate deficiencies of the previously discussed Shimizu and Andrews '340 references.

In summary, we have not sustained the Examiner's 35 U.S.C. § 103(a) rejection of any of the claims on appeal. Therefore, the decision of the Examiner rejecting claims 1-8, 10-12, and 14-25 is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
JOSEPH F. RUGGIERO Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
MAHSHID D. SAADAT Administrative Patent Judge	)	

JFR:hh

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